Rehabilitation of a road section connecting the villages of Pakhulani and Chale in Tsalenjikha Municipality

Environmental and Social Screening Report and

Environmental and Social Management Plan

WORLD BANK FINANCED

The Second Regional and Municipal Infrastructure Development Project (SRMIDP) Additional Financing (AF)

March 2021

Sub-project Description

The sub-project (SP) aims to rehabilitate a local road connecting two villages Pakhulani and Chale. The length of the road is 7,623 km. The Chale-Pakhulani road is located in Tsalenjikha Municipality, approximately 330 km away from the capital Tbilisi. The SP includes the arrangement of two-layer asphalt concrete pavement, a carriageway with a width of 5 m, entrances to the yards, joints, drainage pipes, ditches, bridge pipes, as well as slope retaining and gabion walls.

The road was constructed in the 70s of the last century during the Enguri hydropower station's construction. Currently, the road pavement is considerably cracked and damaged.

While designing the SP, the existing condition of the road surface and other factors were taken into consideration, e.g., the fact that the road runs through the densely populated area. Therefore, the following road characteristics are to be followed in the rehabilitation process:

- Retaining existing roadway with the width of 7-9 m and the height of 0.3-1.2m;
- Arrangement of the top layer of pavement with fine-grained dense asphalt concrete hot mix, type B, class II, thickness – 4cm;
- Arrangement of lower layer of pavement with coarse-grained porous asphalt concrete hot mix, class II thickness – 6cm;
- Arrangement of the base with sand-crushed stone (grade 0-40mm) with 15 cm thickness;
- Arrangement of subbase with sand-gravel aggregate with 20cm thickness.

Besides the road rehabilitation, the works related to road's artificial structures are planned within the SP. This work includes the rehabilitation of the bridge crossing over the river Makhaskhuri (მდ მახასყური)

The following works are planned concerning the bridge crossing structures:

- Replacement of pavement on the bridge deck and sidewalls
- Arrangement of new r/c parapet walls and replacement of handrails
- Restoration of bridge accesses
- Cleaning of bridge abutments and superstructure

Rehabilitation of the pipe-bridge implies execution of the following work:

- Cleaning of the pipe body
- Filling destroyed and washed-out parts of pipe with concrete
- Restoring pipe body and surfaces of culver head with shotcrete
- Strengthening of the washed-out slope by constructing the gabion wall with the length of 20m and height of 3m
- Cleaning the riverbed from bed load material

However, existing reinforced concrete pipes are shabby, concrete is disintegrated and weathered, rings are distanced from each other, filled and silted with outlet material; therefore, it is planned to dismantle the existing pipes and replace them with new reinforced concrete pipes.

The SP also envisages the construction of the lower retaining wall with a length of 22m for road protection purposes. Besides, SP includes the arrangement of the concrete wall for the stabilization of the slope.

The given SP also includes the arrangement of junctions at the local entrances. The road pavement on junctions will be single-layer asphalt concrete pavement with 5 cm thickness and a graded crushed stone base with a thickness of 12 cm.

The SP envisages the installation of road signs, signal posts, parapets, and individual road signs. The road barriers will be placed along the slopes for traffic safety reasons.

The SP also includes the arrangement of new car pavilions and bus stop areas.

The Investment Financing Agreement between the Municipal Development Fund (MDF) of Georgia and the Tsalendjikha Municipality will be signed shortly following the final approval of the Subproject Summary Report (SSR). The Tsalenjikha Municipality will be responsible for the maintenance of the rehabilitated road.

Environmental and Social Screening

(A) IMPACT IDENTIFICATION

Does the sub-project have tangible impact on the environment?	The SP will have a modest negative environmental impact and it is expected to have a positive impact during road operation as less emission and noise will occur from vehicle movement on the improved road surface. The main negative impact will be during the construction phase, which includes works for the arrangement of the roadbed and reinforcing works requiring movement and operation of heavy vehicles. The SP area is located within a modified environment. Therefore, the impact is transitory and insignificant (noise, emissions, construction waste, temporary disturbance of traffic, and access).
What are the significant beneficial and adverse environmental effects of sub-project?	No significant adverse environmental impacts are expected. The expected modest negative environmental impacts will occur during the construction phase. They are likely to be short term, and typical for small to medium scale rehabilitation works in the rural landscape: noise, dust, vibration, and emissions from the operation of construction machinery; the generation of construction waste; disruption of traffic and pedestrian access, possible water pollution incidents, such as spillages of fuel, oil or construction materials, washing of vehicles and equipment, exposure of contaminated land. After implementing the SP, road maintenance expenditures will decrease, and so will the emissions of the harmful exhaust. Fuel consumption will drop as well. Minimizing road ponding and flooding risk works for cleaning the existing stormwater ditches along the road is planned within the SP. Transportation of construction materials and generated waste will slightly increase road congestion during the planned works. Community health and safety will be an issue during the construction phase as residential buildings are located near the SP site. Effects likely to occur during the construction phase are short-term and would not deteriorate the existing conditions. The impacts on vegetation during the construction phase will be minor. No tree cutting are planned on any of the SP sites according to the project design.
May the sub-project have any significant impact on the local communities and other affected people?	The SP will have a long-term positive social impact by improving the living and transportation conditions of the locals and visitors. It will decrease existing negative effects on the community, such as dust, emissions, and noise. No land take and relocation are expected.

	The long-term social impact will be positive, temporary jobs will be created during construction, and hence, the local population's income will be increased.

(B) MITIGATION MEASURES

Were there any alternatives to the sub-project design considered?	As the SP envisages rehabilitation of the existing road, alternatives regarding the SP design were not considered.
What types of mitigation measures are proposed?	The expected negative impacts of the construction phase can be easily mitigated. The contractor will be responsible for the waste disposal at the permitted location, use the quarry materials from the licensed quarries only, prevent water and soil pollution (fuel spills due to equipment failure, raw asphalt/concrete spills), avoid disturbance of population (noise, dust, emissions) through proper work/supplies scheduling, traffic management, and good maintenance of the construction machinery. Works will not be executed during rainy weather, construction materials will not be allowed to enter any watercourse, revision of vehicles will be required to ensure that there is no leakage of fuel and lubricating materials, all machinery will be maintained and operated such that all leaks and spills of materials will be minimized, the contractor will be required to organize and cover material storage areas. The material storage sites will be protected from washing out during heavy rainfalls and flooding through covering by impermeable materials; car maintenance points will not be located within 50m of any watercourse. In the SP implementation process, warning signs will be used, and traffic will be managed around the work sites. Community health and safety will be an issue during the construction phase as residential buildings are located near the project site.. Therefore, the contractor will be responsible for taking specific measures to mitigate the impact, including informing the affected population on the upcoming works and any temporary disruptions of municipal service, limiting working hours to daytime, limiting the speed of moving construction vehicles and machinery, minimizing noise and dust emissions, etc. The contractor should also ensure safe pedestrian access to homes and businesses located along the road and safeguard any excavations, ditches, and depressions from accidental falling of people or animals. The contractor must perform works accurately to avoid damage to fences and other private property located along the road under the rehabilitation.
What lessons from the previous similar projects have been incorporated into the sub-project design?	MDF has a broad experience in the implementation of medium and large-scale road and streets rehabilitation sub-projects financed by various donor organizations. Based on lessons learned from previous similar projects, design envisages rehabilitation of road pavement and the arrangement of stormwater ditches, which will ensure further maintenance of the road cover.

Have concerned communities been involved and have their interests and knowledge been adequately taken into consideration in sub-project preparation?	Due to circumstances related to the COVID-19 outbreak, conducting a remote public consultation on the SP of road rehabilitation in the villages of Chale and Pakhulani may be required. Following national regulations in force by the time of rehabilitation and following the National Center for Disease Control (NCDC), MDF will take decisions on structuring the consultation process. If remote consultations are to be undertaken, MDF will use telephone communication to notify stakeholders of the planned public consultations on the draft ESMP. During the phone conversation, the information will be collected, and the most suitable format of virtual consultation will be planned. Those who have no means of communication, except for the phone, will be provided with information on the SP's environmental and social aspects by phone. Suppose they require visualization of the project, along with the documentation to be reviewed. In that case, the local municipality's authorized persons will visit them as per the regulations and recommendations set by the NCDC to familiarize them with the relevant documents. The information booklets reflecting detailed information about the forthcoming consultation meetings will be placed at the village's most visited places.

(C) CATEGORIZATION AND CONCLUSION

Conclusion of the environmental screening:

1. Subproject is declined ☐
2. Subproject is accepted ■

Subproject preparation requires:

1. Completion of the Environmental and Social Management Checklist For Small Construction and Rehabilitation Activities ■
2. Environmental and Social Review, including development of Environmental and Social Management Plan ☐

Social and Cultural Resource Screening of SP

Social safeguards screening information		Yes	No
1	Is the information related to the affiliation, ownership and land use status of the sub-project site available and verifiable? (The screening cannot be completed until this is available)	X	
2	Will the sub-project reduce people's access to their economic resources, such as land, pasture, water, public services, sites of common public use or other resources that they depend on?		X
3	Will the sub-project result in resettlement of individuals or families or require the acquisition of land (public or private, temporarily or permanently) for its development?		X
4	Will the project result in the temporary or permanent loss of crops, fruit trees and household infra-structure (such as ancillary facilities, fence, canal, granaries, outside toilets and kitchens, etc.)?		X
If answer to any above question (except question 1) is "Yes", then **OP/BP 4.12 Involuntary Resettlement** is applicable and mitigation measures should follow this OP/BP 4.12 and the resettlement Policy Framework			
Cultural resources safeguard screening information		Yes	No
5	Will the project require excavation near any historical, archaeological or cultural heritage site?		X
If answer to question 5 is "Yes", then **OP/BP 4.11 Physical Cultural Resources** is applicable and possible chance finds must be handled in accordance with OP/BP and relevant procedures provided in the Environmental and Social Management Framework.			

Environmental and Social Management Plan

PART A: GENERAL PROJECT AND SITE INFORMATION

INSTITUTIONAL & ADMINISTRATIVE	
Country	Georgia
Project title	Second Regional and Municipal Infrastructure Project (SRMIDP)
Sub-Project title	Rehabilitation of connecting road in the villages of Chale and Pakhulani, Tsalenjikha Municipality.
Scope of site-specific activity	The sub-project (SP) aims to rehabilitate a local road connecting two villages Pakhulani and Chale. The length of the sub-project is 7,623 km. Pakhulani-Chale road is located in Tsalenjikha Municipality, in the west part of Georgia, 330 km away from the capital Tbilisi. The SP considers the following road rehabilitation characteristics: - Retaining existing roadway with the width of 7-9 m and height raised to 0.3-1.2m; - Construction of top layer of pavement with fine-grained dense asphalt concrete hot mix, type B, class II, thickness – 4cm; - Construction of lower layer of pavement with coarse-grained porous asphalt concrete hot mix, class II thickness – 6cm; - Construction of base of sand-crushed stone (grade 0-40mm) with 15 cm thickness; - Construction of subbase of sand-gravel aggregate with 20cm thickness. Besides the rehabilitation of the road, other works related to road's artificial structures are also planned. This includes rehabilitation of bridge crossing over the river Makhasquriat, construction of a lower retaining wall with a length of 22m for road protection, and construction of the concrete wall for slope stabilization. The SP also includes the arrangement of junctions at the local entrances. The SP envisages the installation of road signs, signal posts, parapets, and individual road signs. The road barriers will be placed along the slopes for traffic safety reasons. The SP also includes the construction of new car pavilions and bus stop areas. Investment Financing Agreement between Municipal Development Fund of Georgia and the Tsalendjikha Municipality will be signed shortly following the final approval of SSR. The Tsalenjikha Municipality will be responsible for the maintenance of the rehabilitated road.

Institutional arrangements (WB)	Task Team Leader: Axel Baeumler		Safeguards Specialists: Darejan Kapanadze - Environment Sophia Georgieva – Social
Implementation arrangements (Borrower)	Implementing entity: Municipal Development Fund of Georgia	Works supervisor: company Eptisa Servicios de Ingenieria S.L. Spain	Works contractor: (TBD)
SITE DESCRIPTION			
Name of institution whose premises are to be rehabilitated	Tsalenjikha Municiplaity		
Address and site location of institution whose premises are to be rehabilitated	5 Salia Street, Tsalenjikha, Georgia		
Who owns the land? Who uses the land (formal/informal)?	Tsalenjikha Municiplaity		
Description of physical and natural environment around the site	The SP area stretches at the border lane between the morphologic units of the hilly terrain of Kolkheti foothill, Samurzakano foothill, and Enguri river valley. The Enguri River valley down from the confluence with the Magana River to the Zugdidi is developed at hilly terrain that is characterized by many divisions of the gorges of tributaries. The mentioned locale abounds in terraces located along the rivers and creates the relatively sloping terrain. The soil of the area is represented by the red and yellow ground, while the Enguri shoreline is structured by alluvial soil. The vegetation of the rayon bears anthropogenic character, just within the narrow gorges of rivers. At watersheds located at 700-800 m altitude, the Colchic forest spreads with a permanent sub-forest that abounds in lianas. The climatic zoning ascribes the SP territory to the marine, subtropical climatic district of western Georgia with moderately humid air, dominant northern winds, and inconsiderable fluctuations of precipitates. This region's climatic data is taken from construction climatologic norms of Georgia - pn 01.05-08 and according to the nearest meteorological station Tsalenjikha (altitude 222m.). The SP territory is characterized as follows: Annual average air temperature + 13.30C;		

	The average temperature of the coldest month (January) + 4.60C; The average temperature of the hottest month (July) +21.60C; THE absolute minimum temperature - -180C; Absolute maximum of temperature + 400C; Average annual relative air humidity -74% The highest speed of wind once per 1 year - 18 m/sec The highest possible speed of wind once per 5 years - 22 m/sec The highest possible speed of wind once per 10 years - 24 m/sec The highest possible speed of wind once per 15 years - 25 m/sec The highest possible speed of wind once per 20 years - 26 m/sec Average annual precipitates - 2015 mm; 24 hours maximum of precipitates - 105mm; Number of days with snow cover - 24; Normative depth of seasonal soil freeze - 0
Locations and distance for material sourcing, especially aggregates, water, stones?	The nearest Zugdidi landfill is located approximately 30 km away from the project site.
LEGISLATION	
National & local legislation & permits that apply to project activity	The SP has been classified low-risk Category B according to the World Bank policies and the ESMF. Georgian legislation does not require any environmental review, approval, or permit for the SP. Though according to the national regulatory system: - construction materials must be obtained from licensed providers, - if a contractor wishes to open quarries or extract material from the riverbed (rather than purchasing these materials from other providers), the contractor must obtain licenses for extraction. - If a contractor wishes to operate its asphalt or cement-concrete mixing plant (rather than purchasing these materials from other providers). In that case, the contractor must obtain an environmental permit with an established limit of pollutant concentrations in emissions. A technical report on the inventory of atmospheric air pollution stationary source agreed with the Ministry of Environmental Protection and Agriculture (MoEPA). - Permanent placement of the inert material (cut the ground and sedimentary soil) generated in the course of earthworks in a selected location must be approved by local (municipal) governing bodies in written; - Suppose over 200 tons of non-hazardous waste or over 1000 tons of inert materials or over 120 kg of hazardous waste is generated annually due to the contractor's activities. In that case, the contractor shall prepare and obtain approval of the Ministry of Environmental Protection and Agriculture (MEPA) on the Waste Management Plan, prepare the report on waste inventory and appoint an environmental manager, whose identity information should be submitted to the MEPA following the requirements of the Waste Management Code. - If tree cutting becomes necessary during the SP implementation, the Construction Contractor will undertake inventory of trees in the SP impact

	area, indicate trees subject to removal and submit the document to MEPA (for Red Listed tree species) and Tsalenjikha City Hall (for trees not included in Red List) for obtainment tree cutting permission prior to commencement of works. The permission document will consist of the compensation measures based on the presented inventory. The compensation fees will be paid within the SP scope. The trees will be cut under the supervision of a designated specialist. GOST and SNIP norms must be adhered.

GRIEVANCE REDRESS MECHANISM

Appropriate grievance redress mechanism was established to solve grievances of Project-Affected People, as required.
Tsalenjikha Municipality has assigned a responsible person: Levan Shengelia, leading specialist of economic and infrastructure unit of Tsalenjikha City Hall, Email: shengelaia.82@mail.ru, Tel: 599 934 503, to receive, review and react to the APs grievances.

The contact person from the MDF is Nutsa Gumberidze (Tel: +995 598 88 20 19, feedback@mdf.org.ge, 150 Davit Aghmashenebeli ave., 4th floor, 0112 Tbilisi, Georgia)

If the grievance is not unsolved at the local level, it will be lodged to the MDF. As for grievance monitoring MDF registers, all received compliances, comments, and how the compliance was addressed. During public consultations, the local population was informed about the grievance redress process and receive information about contact persons.

PUBLIC CONSULTATION

When / where the public consultation process will take /took place	Following national regulations in force by the time of rehabilitation and following the National Center for Disease Control (NCDC), MDF will take decisions on structuring the consultation process. If remote consultations are to be undertaken, MDF will use telephone communication to notify stakeholders of the planned public consultations on the draft ESMP. During the phone conversation, the information will be collected, and the most suitable format of virtual consultation will be planned. Those who have no means of communication, except for the phone, will be provided with information on the SP's environmental and social aspects by phone. Suppose they require visualization of the project, along with the documentation to be reviewed. In that case, the local municipality's authorized persons will visit them as per the regulations and recommendations set by the NCDC to familiarize them with the relevant documents. The information booklets reflecting detailed information about the forthcoming consultation meetings will be placed at the village's most visited places.

ATTACHMENTS

Attachment 1. Existing conditions of the Chale-Pakhulani road

Attachment 2. Aerial map of the Chale-Pakhulani road area

Attachment 3. Design drawing of the Chale-Pakhulani road

PART B: SAFEGUARDS INFORMATION

ENVIRONMENTAL /SOCIAL SCREENING			
Will the site activity include/involve any of the following?	**Activity/Issue**	**Status**	**Triggered Actions**
	1. Rehabilitation	■ Yes [ ] No	If yes, see Section **A** below
	2. New construction	[ ] Yes ■ No	If yes, see Section **A** below
	3. Individual wastewater treatment system	[ ] Yes ■ No	If yes, see Section **B** below
	4. Historic building(s) and districts	[ ] Yes ■ No	If yes, see Section **C** below
	5. Acquisition of land[1]	[ ] Yes ■ No	If yes, see Section **D** below
	6. Impacts on land and property use	[ ] Yes ■ No	If yes, see Section **E** below
	7. Hazardous or toxic materials[2]	[ ] Yes ■ No	If yes, see Section **F** below
	8. Impacts on forests and/or protected areas	[ ] Yes ■ No	If yes, see Section **G** below
	9. Handling / management of medical waste	[ ] Yes ■ No	If yes, see Section **H** below
	10. Traffic and pedestrian Safety	■ Yes [ ] No	If yes, see Section **I** below
	11. Community and labor health and safety	■ Yes [ ] No	If yes, see Section **J** below

[1] Land acquisitions includes displacement of people, change of livelihood encroachment on private property this is to land that is purchased/transferred and affects people who are living and/or squatters and/or operate a business (kiosks) on land that is being acquired.

[2] Toxic / hazardous material includes but is not limited to asbestos, lead-containing and other toxic paints, noxious solvents, etc.

PART C: MITIGATION MEASURES

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
0. General Conditions	Notification and Worker Safety	(a) Obtain all legally required permits for construction, extraction, natural construction materials, disposal of waste, and others as relevant. (b) Ensure the supply of personal protective equipment to stall and personnel following good international practice (always hardhats, as needed masks and safety glasses, harnesses, and safety boots), and control its use. (c) Signpost worksites to inform workers of key rules and regulations to follow. (d) Put up information on the company undertaking works at each worksite and provides contact information.
A. General Rehabilitation and /or Construction Activities	Air Quality	(a) Use debris chutes during interior demolition above the first floor. (b) Keep demolition debris in a controlled area and spray with water mist to reduce debris dust. (c) Suppress during pneumatic drilling/wall destruction by ongoing water spraying and/or installing dust screen enclosures at the site. (d) Keep the surrounding environment (sidewalks, roads) free of debris to minimize dust. (e) There will be no open burning of construction / waste material at the site. (f) There will be no excessive idling of construction vehicles at sites.
	Noise	(a) Limit construction noise to daytime working hours. (b) During operations, the engine covers of generators, close air compressors, and other powered mechanical equipment, and place equipment as far away from residential areas as possible
	Water Quality	(a) Establish appropriate erosion and sediment control measures such as hay bales and/or silt fences to prevent sediment from moving off-site and causing excessive turbidity in nearby streams and rivers. (b) Wash construction vehicles and machinery only in designated areas where runoff will not pollute natural surface water bodies.

	Waste management	(a) Minimize the amount of generated waste to the extent possible. (b) Separate various types of generated waste and re-use / recycle relevant types of waste to the possible extent. (c) Allocate sites for temporary on-site storage of various types of waste. Do not allow the accumulation of excessive amounts of waste on-site. (d) Obtain formal arrangements with municipal authorities to dispose of household waste and final placement of excess material (inert construction waste). (e) Make timely arrangements for the disposal or hand-over of hazardous waste to licensed companies.
	Material supply	(a) Use existing plants, quarries, or borrow pits with appropriate official approval or valid operating license. (b) Obtain licenses for any new quarries and/or borrowing areas if their operation is required; (c) Reinstate used sections of quarries and/or borrowing areas as extraction proceeds on or properly closed quarries if extraction completed and license expired; (d) Haul materials in off-peak traffic hours; (e) Place speed regulating, diverting, and warning signs for traffic as appropriate.
I. Traffic and Pedestrian Safety	Direct or indirect hazards to public traffic and pedestrians by construction activities	In compliance with national regulations, ensure that the construction site is adequately secured and construction-related traffic is regulated. This includes but is not limited to: ▪ Signposting, warning signs, barriers, and traffic diversions: the site will be visible, and the public warned of all potential hazards. ▪ Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes. ▪ Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or livestock movement times. ▪ Active traffic management by trained and visible staff at the site is required for the safe and convenient passage for the public. ▪ Safe and continuous access to office facilities, shops, and residences during renovation activities, if the buildings stay open for the public.
J. Community and labor health and safety	Public relationship management	(a) Assign local liaison person within the Contractor's team to communicate with and receive requests/ complaints from the local population. (b) Consult local communities to identify and proactively manage potential conflicts between an external workforce and local people.

		(c) Raise local community awareness about sexually transmitted disease risks associated with an external workforce and include local communities in awareness activities. (d) Inform the population about construction and work schedules, interruption of services, traffic detour routes and provisional bus routes, blasting, and demolition, as appropriate. (e) Limit construction activities at night. When necessary, ensure that night work is carefully scheduled and the community is adequately informed about taking essential measures. (f) At least five days in advance of any service interruption (including water, electricity, telephone, bus routes), advise the community through postings at the worksite, at bus stops, and in affected homes/businesses. (g) Address concerns raised through Grievance Redress Mechanism established by the Employer within the designated timeline within the scope of Contractor's liability. (h) To the extent possible, do not locate work camps close to local communities. (i) Undertake siting and operation of worker camps in consultation with neighboring communities.
	Labor management	(a) Recruit unskilled or semi-skilled workers from local communities to the extent possible. Where and when feasible, worker skills training should be provided to enhance the participation of local people. (b) Provide adequate lavatory facilities (toilets and washing areas) in the worksite with sufficient supplies of hot and cold running water, soap, and hand drying devices. A temporary septic tank system should be established for any residential labor camp and without causing pollution of nearby watercourses. (c) Raise awareness of workers on overall relationship management with the local population, establish the code of conduct in line with international practice and strictly enforce them, including the dismissal of workers and financial penalties of adequate scale. (d) Immediately notify supervision engineer and employer on any worksite accidents causing tangible damage to human or environmental health.

PART D: MONITORING PLAN

Activity	What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Who (Is responsible for monitoring?)
CONSTRUCTION PHASE						
Supply with construction materials	Purchase of construction materials from the officially registered suppliers	In the supplier's office or warehouse	Verification of documents	During the conclusion of the supply contracts	To ensure technical reliability and safety of infrastructure	MDF, Construction supervisor
Transportation of construction materials and waste Movement of construction machinery	Vehicles and machinery are kept in standard technical condition; Truck loads are confined and protected with lining; Established hours and routes of transportation are respected	Construction site	Inspection	Unannounced inspections during work hours and beyond	Limit pollution of soil and air from emissions; Limit nuisance to local communities from noise and vibration; Minimize traffic disruption.	MDF, Construction supervisor, Traffic Police
Sourcing of the natural construction material	Purchase of material from the existing suppliers if feasible; Obtaining of extraction license by the works contract and strict compliance with the license conditions;	Borrowing areas	Inspection of documents Inspection of works	In the course of material extraction	Limiting erosion of slopes and degradation of ecosystems and landscapes; Limiting erosion of river banks, water pollution with suspended particles, and	MDF, Construction supervisor

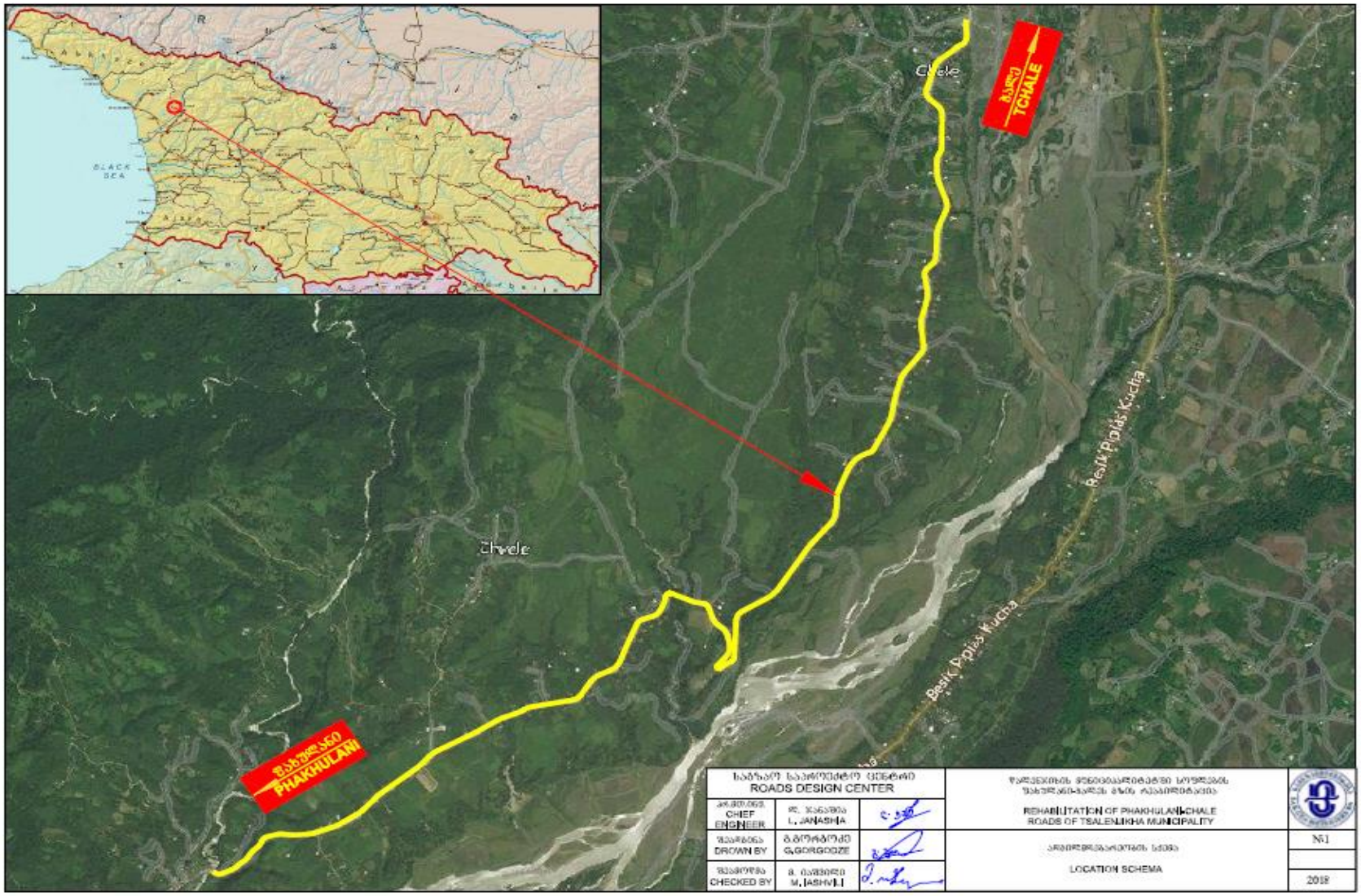
	Terracing of the borrow area, backfilling to the exploited areas of the borrow site, and landscape harmonization; Excavation of river gravel and sand from outside of the water stream, arrangement of protective barriers of gravel between excavation area and the water stream, and no entry of machinery into the water stream.				disruption of aquatic life.	
Generation of construction waste	The temporary storage of construction waste in specially allocated areas; Timely disposal of waste to the formally designated locations	Construction site; Waste disposal site	Inspection	Periodically during construction and upon complaints	Prevent pollution of the construction site and nearby area with solid waste	MDF, Construction supervisor
Traffic disruption and limitation of pedestrian access	Installation of traffic limitation/diversion signage; Storage of construction materials and temporary placement of construction waste in a way preventing congestion of access roads	At and around the construction site	Inspection	In the course of construction works	Prevent traffic accidents; Limit nuisance to residents	MDF, Construction supervisor

Workers' health and safety	Provision of uniforms and safety gear to workers; Provision of potable water and lavatories for men and women at worksite; Informing of workers and personnel on the personal safety rules and instructions for operating machinery/equipment, and strict compliance with these rules/instructions; Adoption and adherence to plan for preventing spread of COVID-19 infection and action in response to the possible outbreak.	Construction site	Inspection	Unannounced inspections in the course of work	The limited occurrence of on-the-job accidents and emergencies	MDF, Construction supervisor
Works within settlement	Informing affecting population on the upcoming works and any temporary disruptions of municipal service provision that may occur during works; Observance of the established working hours during daytime, minimizing noise and dust emissions, limiting speed of moving construction vehicles and machinery.	Construction site	Inspection	Recurrent	Ensure the safety of residents and minimize nuisance	MDF, Construction supervisor

	Provision of safe pedestrian access to homes and businesses located along the road to be rehabilitated and safeguarding any excavations, ditches, and depressions from accidental falling of people/animals; Avoidance of damage to fences and other private property is located along the road and prompt restoration if it may not be avoided.					
OPERATION PHASE						
Maintenance of rehabilitated road	Maintenance of relevant road signage for traffic safety; Demarcation of the sections of road under repair; Disposal of asphalt and or other waste from the repair work to the designated landfill.	Rehabilitated sections of roads	Inspection	During maintenance works	Prevent road accidents and disruption of traffic	Tsalenjikha Municipality

Attachment 1. Current condition of the Chale-Pakhulani connecting road

Attachement 2. Aerial map of the Chale-Pakhulani connecting road area



Attachment 3. Design drawing of Chale-Pakhulani connecting road